Connecting the dots: how the Internet of Things is creating vast opportunities for insurers

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One would be hard-pressed (and perhaps rather foolish) to deny the impact that the Internet of Things (IoT) will have on the world around us. From automated cars and home monitoring systems through to the management of infrastructure and the safety of underwater pipelines, IoT is already proving its ability to disrupt and transform virtually every aspect of our lives.

For the insurance sector, the adoption of IoT will be utterly transformative. Old business models will collapse as new models, revenue streams and opportunities burst into the market. And everything — from the way risk is assessed through to the way insurance products are sold — will be completely reinvented. Indeed, the real question for insurance executives isn't whether or not IoT will disrupt the sector, but rather, how they can best be preparing today for the advantages IoT will deliver tomorrow.

It's hard to ignore the hype around IoT. Some business gurus suggest it will have a bigger impact on society and business than the internet did in the 1990s. Most expect it to unleash a new and unprecedented era of productivity and value generation. The ability to enable contextual computing where the IoT sensors are able to create a richer data picture of the environment and will no doubt enable better decisions.

The numbers are certainly eye-popping. According to IDC Research, the IoT market will be valued at US$7.1 trillion within the next 5 years. In the same time period, the number of IoT devices added to the network will more than double. A report by McKinsey Consulting puts the impact of IoT across just nine specific use 'settings' at anywhere between US$4 trillion and US$11 trillion by 2025.

An even bigger punch

Yet it's not the size of the market that should interest insurers. Rather, it's the impact IoT will have on their existing business models that really matters. The reality is that — much like it has in the automotive, manufacturing, retail and logistics sectors (to name but a few) — the adoption of IoT will utterly transform the insurance sector.

Consider, for example, how the data from sensors in a car or in the home could enhance the way that insurers assess, price and manage customer risk. Or how IoT sensors on pipelines or railways could be used to predict failure coupled with smart systems to prevent damage. Or even how data from IoT devices could enable 'pay by use' insurance models. The possibilities seem limited only by the imagination.

Opportunities come with challenges

For some insurers, the adoption of IoT will be the ultimate game-changer, creating new competitive advantages, unanticipated sources of new revenue and innovative business models that can drive growth even while other, more traditional models and revenue streams erode.

Take, for example, a contents policy for a residential home. Smart use of IoT sensors and monitoring should reduce risk, thereby driving down policy premiums and reducing insurers' margins. But by adding actuators to the IoT device — say a control that automatically shuts off the mains if certain risk conditions are met — insurers could create new revenue streams by taking an active role in preventing risks rather than just protecting against them.

Taking advantage of new opportunities will not be easy at first. The shift from risk manager to risk preventer will come with challenges and big questions will need to be answered, such as: Who actually controls the 'actuator'? Who is responsible for the risk should the actuator controls fail? What levels of 'intervention' are customers willing to accept and in what situations?

Similar questions will undoubtedly arise in the auto insurance sector (who is responsible if safety controls fail?), the health insurance sector (who is protecting personal health data from wearable devices?) and the reinsurance sector (who carries the unknown risks?).

Need for innovative thinking

While there clearly remains much uncertainty about the specific uses and restrictions of IoT data and devices, what is certain is that insurers will need to start thinking much more strategically about IoT if they hope to survive and thrive in the future.

In part, this will require insurance executives to be more innovative about how they incorporate and adapt IoT into their existing business models to drive real and sustainable improvements. This means going beyond simply collecting data from IoT devices to instead thinking about how that data can be analyzed to deliver insights that improve performance or enhance operational controls and processes. Knowing that

About Flexeye

Flexeye is a multinational IoT service provider with offices in the US, UK and India.

Flexeye builds and deploys 'Smart Systems' that drive sustainable performance by analyzing connected data feeds.

The company was recognized as a 'Cool Vendor 2014' for IoT and was named the 'One to watch' in Asia Pacific by Gartner.

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within the next 5 years.

Source: IDC Research, 2014.

a certain risk is increasing is great; but being able to then turn that information into real-time protection services backed by an insurance product will be differentiating.

Similarly, insurance executives will need to think more creatively about how they might use their position and capabilities to create entirely new business models and sources of revenue. IoT could, for example, provide insurers with the right data to finally unlock the potential of usage-based insurance. Some are already using data from ground sensors to provide their clients with accurate weather and flood predictions as a 'value-added' service to help them manage their own risk.

Part of an ecosystem

Granted, the insurance sector isn't generally known for innovation. Yet the big challenge for insurers likely won't be the 'blue sky' thinking (many insurers already have teams scouting locations like Silicon Valley, Tel Aviv and London for new ideas), but rather, the need to work as part of a wider ecosystem in order to drive real value from IoT.

The simple fact is that IoT requires insurers to work with a wide variety of nontraditional partners including device manufacturers, analytics providers, telecom providers, software developers and even competitors. And this, too, will lead to a number of new challenges and considerations. Who, for example, owns the data — the device manufacturer who collects it, the telecom provider who transmits it, or the insurance company that stores and uses it? What standards and controls will be put in place to protect that data as it passes from one 'entity' to another within the ecosystem? And who ultimately owns the customer?

To complicate matters further, these ecosystems that insurers create around IoT will, themselves, need to be intertwined into other ecosystems. So while, at one level, an auto insurer will need to focus on building their own ecosystem to create a new solution, they will also need to ensure their work links into work being done by automotive IoT developers and manufacturers. And those, in turn, will need to be linked into the wider IoT ecosystem of developers, investors and regulators.

Talking a common language

Another area where insurers will need to collaborate in order to drive value from IoT is around standards. Much like any other emerging technology, IoT is still a virtual 'Wild West' of conflicting technology languages, controls and communications processes. But this, too, is rapidly changing.

Google's Nest, for example, has partnered with companies such as Samsung Electronics, ARM Holdings, Freescale Semiconductor and Silicon Labs to develop their 'Thread' networking protocol aimed at standardizing IoT communications in the home. At the same time, Intel has partnered with Cisco, AT&T, GE and IBM to create standards specifically for industrial IoT use.

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Source: www.flexeye.com

In the UK, the government is supporting the development of the HyperCat Consortium — a collaboration in which both Flexeye and KPMG are participating — to drive secure and interoperable IoT for industry.

This addresses two of the central challenges of the rapidly evolving IoT: firstly, how to find relevant and trustworthy data from connected 'things'; and, secondly, how to make it easier for those things to talk to each other. McKinsey estimate that interoperability is essential to unlock as much as 40 percent of the total value of the IoT, so it really matters to insurers and the businesses with whom they need to collaborate.

The HyperCat specs have already been agreed by 50 leading IoT companies and are intended to help users discover publicly available or shared data on an IoT server in order to build new applications and business models. In total, around 750 companies are backing the standard. Essentially, we are creating a platform on top of which new idea can grow.

Taking the next step

So what can insurers do today to prepare for the inevitable transformation that IoT will bring? We see three immediate actions that should be taken:

1. Assess your current product portfolio for products that are most likely to be enhanced by IoT and, conversely, most likely to be disrupted. This provides for a planning horizon for which products should start to be scaled back or divested and where the next wave of investment in product development should be directed.

2. Start to understand how your existing IT infrastructure and systems would react to the introduction of web scale data flows and how this impacts your current IT strategies, and start to make informed changes to ensure that you are well-placed to cope once an IoT-enabled product is launched.

3. Invest in IoT labs to experiment with the technology, integration patterns, partnerships and investment cases to take IoT-backed products to market.

It's an exciting time to be in the insurance industry. IoT presents a fantastic opportunity for an insurer to be truly innovative and disruptive. Turning the Internet of Things into the Internet of Insured Things. ■

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Gary leads a team of data scientists and data engineers in the agile development of data science solutions. The focus of the team is raising the bar in terms of industrializing data science solutions and in helping clients bring 'the science' into business as usual functions.
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